

BEST AVAILABLE COPY**REMARKS**

In the Office Action, the Examiner withdrew claims 12-18 as being drawn to a non-elected invention. The Examiner objected to the abstract and the headings of the specification. Claims 1-4, 9-11, 19 and 21-23 were rejected pursuant to U.S.C. § 102(b) as being anticipated by Adams et al. (U.S. Patent No. 5,937,950). Claims 5-8 and 20 were rejected pursuant to 35 U.S.C. § 103(a) or being unpatentable over Adams et al. in view of Daane et al. (U.S. Patent No. 6,580,034). Applicants respectfully request reconsideration of the application and claims 1-11 and 19-23, including independent claims 1 and 19.

The withdrawn claims have been cancelled. The election of claims 1-11 and 19-23 in response to restriction requirement is confirmed.

The abstract has been amended. The abstract conforms to the suggested content.

The headings in the specification have not been amended. The specification is clear with the current headings. The use of different headings, such as "Background" instead of "Background of the Invention," is allowed. The headings cited by the examiner are merely suggested, not mandatory. The C.F.R. uses "should" with the headings, not "shall" or "must."

Independent claim 1 claims two groups of 10 or more conductors connected with ultrasound transducer elements where the groups are separated by a conductive separation layer. Adams et al. do not disclose these limitations. Adams et al. describe a cable for blood pressure, one or more pulse sensors, a thermometer, etc. (col. 1, lines 10-20; col. 3, lines 43-46; and col. 6, lines 39-42). The transducer elements or sensors for blood pressure are fluid carrying tubes (col. 3, lines 30-32). Adams et al. suggest several types of ongoing monitoring sensors, not ultrasound transducer elements.

Claim 1 claims each ground with 10 or more conductors. Since the conductors connect with ultrasound elements used for scanning and not simple ongoing monitoring sensors, a large number of conductors are provided in the cable. Adams et al. use a mechanical release connector cable block (col. 4, lines 3-14). Given the type of connection, four wires are used (24a-d). When considering alternatives, Adams et al. mention two or three cables, not more (col. 6, lines 35-42). Adams et al. provide a mechanical release cable block for use with a few sensors for ongoing monitoring, so do not suggest using 10 or more conductors in each of two groups.

A person of ordinary skill in the art would not have used the cable of Adams et al. with ultrasound transducers, such as disclosed in Daane et al. First, the mechanical release cable block of Adams et al. for which the cable is designed is unworkable or undesirable for the large number of conductors used in ultrasound (see Daane et al. Col. 3, lines 31-34). Since ultrasound is used in a short term examination, a cable and cable block for monitoring a pole by a patient would only interfere with the ultrasound examination. Second, Adams et al. clearly intended the cable to be used for patient monitoring with only a few sensors. Third, the cable of Adams et al. would not have been used for an ultrasound cable of Daane et al. Daane et al. seeks loose wires along almost the entire length of the cable (col. 2, lines 40-44). The loose wires avoid cross-talk by randomly mixing the wires along the length of the cable (col. 4, line 60-col. 5, line 10). The shield layer separating the groups of wires in Adams et al. may have possibly limited the intermixing and reduced flexibility. Adams et al. and Daane et al. use two different approaches to avoid cross talk. Since the approach of Adams et al. may have interfered with the approach of Daane et al., a person of ordinary skill in the art would not have used the ultrasound cable of many conductors of Daane et al. with the cable of Adams et al.

Independent claim 19 claims an ultrasound system with ultrasound transducer elements. As discussed above, Adams et al. does not disclose ultrasound transducer elements.

Dependent claims 2-11 and 20-23 depend from independent claims 1 and 19, so are allowable for the same reasons. Further limitations distinguish over the references used to reject the dependent claims.

Claim 3 claims transmit and receive beamformers. The examiner cite as to transducers 22. A beamformer operates to create relatively delayed and apodized signals for use in an array, so is not a mere transducer or even an array of transducers.

Claim 5-8 and 20 were rejected over Adams et al. in view of Daane et al. As discussed above, a person of ordinary skill in the art would not have used the signal conductors of Daane et al. with the cable assembly of Adams et al.

Regarding claim 5, the use of coaxial cables further teaches away from using the conductors of Daane et al. with the shielding of Adams et al. Coaxial cables have individual shielding. The grouping of Daane et al. occurs at the ends for ease of termination.

Claim 6 claims a ribbon of conductors for the conductors separated by the conductive separation layer. The Examiner cites the ribbons 34 of Daane et al. However, Daane et al. use ribbons at the ends for connection to transducers or circuitry and separate conductors (not ribbons) in the cable (col. 4, lines 35-36 and 64-67 and col. 5, lines 7-10). Daane et al. do not disclose ribbons separated by a conductive shielding layer.

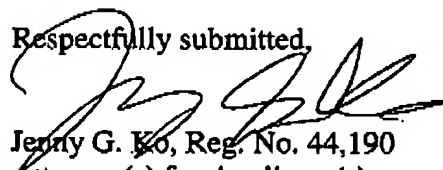
CONCLUSION:

Applicants respectfully submit that all of the pending claims are in condition for allowance and seeks early allowance thereof. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (650) 943-7350 or Craig Summerfield at (312) 321-4726.

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Respectfully submitted,


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